

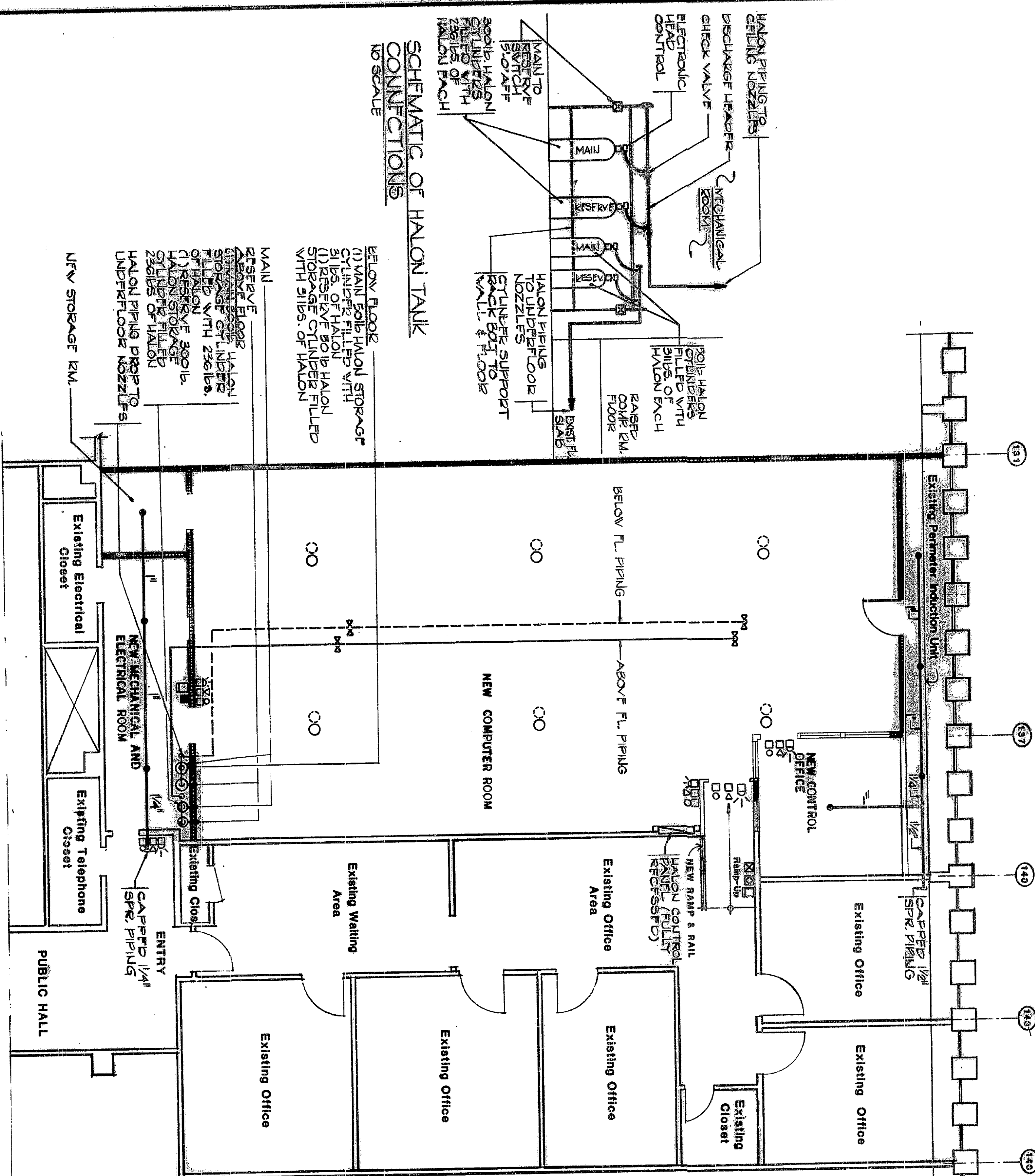
HALON CALCULATION					
ROOM	SQ. FT.	HIGHST	CU. FT.	% CONCN	1525 UNITS
CHAMBER ROOM	12515	7'02"	91296	.0247	2055
COIN LOCKER FLOOR	12515	10'	12515	.0247	30.7

LEGEND	
BO	DISCHARGE ALARM BELL
DB	DISCHARGE HORN
DK	FLASHING LIGHT ASSEMBLY
■	ABORT BUTTON
■	FIRE DPT. PURGE FAN SWITCH
○	IONIZATION SMOKE DETECTOR (ABOVE FL.)
○	IONIZATION SMOKE DETECTOR (BELOW FL.)
—	HALON CONTROL PANEL (RECEIVER)
■	PORTABLE BREATHING APPARATUS
■	HALON DUAL DISCHARGE NOZZLE
■	MANUA - PULL STATION

- 9. Activation of a single product of combustion detector shall cause the following:
  - a. Ignition signal to approved central station and to building class 1, i.e. fire alarm system.
  - b. Sound audible and visual alarms in and outside of protected zone area (units and lights).
  - c. Light appropriate zone alarm light at halon control panel.
  - d. Light appropriate 104th Floor Halon indications on existing 103rd Floor annunciator.
- 10. Activation of a second cross-zoned product of combustion detector shall cause the following:
  - a. Sound evacuation alarm horns and initiate flashing lights in and outside of protected area.
  - b. Silence alarm bells in an outside of area.
  - c. Light appropriate zone alarm light at halon control panel.
  - d. Shutdown AC units 1 and 2.
  - e. Chime normally open dampers.
- 11. Initiate of 30 second evacuation delay period.
- 12. Expiration of the evacuation delay shall cause the following:
  - a. Discharge evacuation horns to gushers.
  - b. Discharge halon into protected area.
  - c. Light "Halon Discharged" warning light outside of protected area.
  - d. Cause computers to shutdown.
  - e. Activate 30 minute pump delay timer.
  - f. Activate discharge light on control panel and at remote investigative stations.
- 13. Activation of an investigative light resistant station shall cause the following:
  - a. Silence evacuation horns and flashing lights.
  - b. Cause alarm bell to sound and visual alarms to operate.
  - c. Initiate a 120 second investigative delay timer at the expiration of which B1, B2 and C1 to C5 will occur.
  - d. Activation of remote halon release station will cause immediate release of halon into protected area and Items C-1 to C-6, A1, and B5 occur.
  - e. Activation of remote halon release station will override either evacuation or investigative delay and cause C-1 to C-6 to occur immediately.

[illegible]

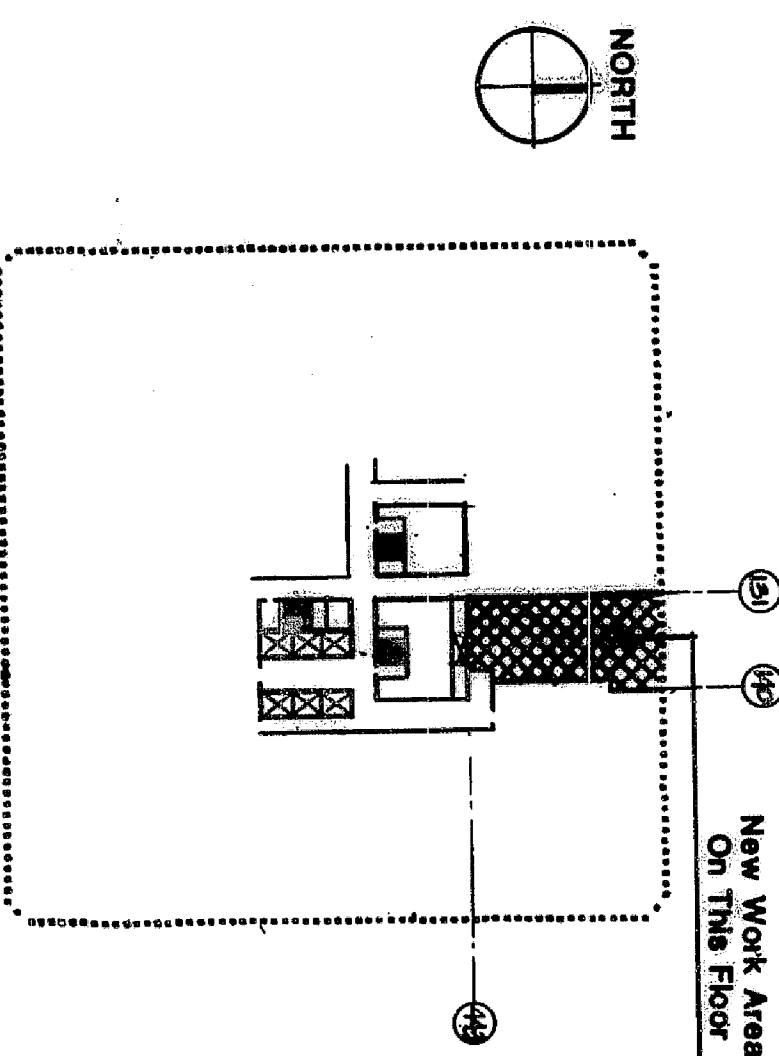
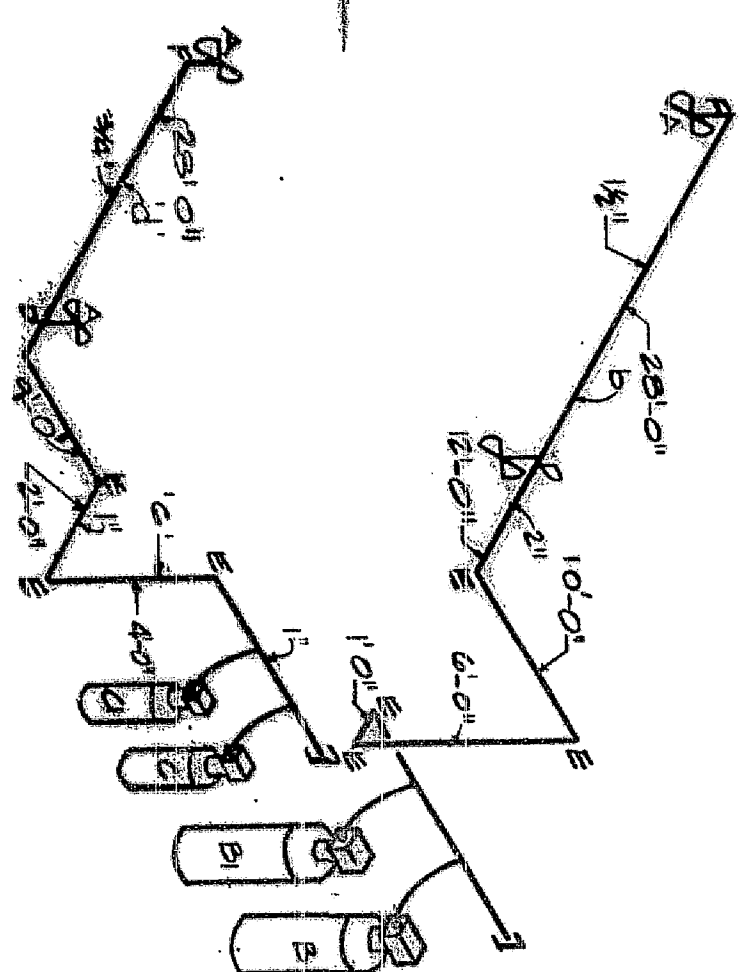
**FRANCIS A.T.A.**  
50 WEST 39 STREET, NEW YORK, NEW YORK 1000 947-6900



**PARTIAL PLAN - 104 TH FLOOR**

- # LEGEND
- A 360° SPURT PAIN NOZZLE
  - B COMPUTER FM, STORAGE TANK 1-500LB TANK FILLED W/ ZIGZAGS OR HALON MINI.
  - C COMPUTERS FM, RESERVE TANK
  - D COMPUTERS FM UNDERLOOR STORAGE TANK 1-50LB TANK FILLED W/ SHIS OF HALON MINI
  - E COMPUTER FM UNDERLOOR RESERVE TANK
  - F TEE & CLOSE INFLP
  - G 90° ELBOW
  - H 90° ELBOW & CLOSE INFLP
  - I CHECK VALVE

PIPE SIZE CALCULATIONS			
SECTION	FLOW (GPM/SEC)	VELOCITY (FT/SEC)	PIPE SIZE
a	23.6	12.5	1 1/2"
b	11.8	6.25	1 1/2"
c	3.1	.15	1 1/2"
d	1.25	.11	1 1/2"



**KEY PLAN**  
**NOT TO SCALE**

QNTAA NO. 232 /  
DATE APPROVED 7/2/82

**CANTOR, FITZGERALD SECURITIES CORP.**  
ONE WORLD TRADE CENTER NEW YORK, N.Y.

PROJECT TITLE NEW COMPUTER ROOM-2  
FLOOR 104TH  
DRAWING TITLE HALON